IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant	: Nancy J. Tolan et al.	Art Unit	: 3677
Serial No.	: 10/688,032	Examiner	: Ruth C. Rodriquez
Filed	: October 15, 2003	Conf. No.	: 2173
Title	: LOW PROFILE TOUCH FASTENER		

Mail Stop Appeal Brief - Patents
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

AMENDED BRIEF ON APPEAL

Appellants are appealing the final rejection of claims 1-3, 5-20, 22-37, and 39-57 in the Office Action dated July 31, 2006 (herein "the Office Action") and respectfully request that the rejections be reversed.

A Pre-Appeal Request for Review, along with a Notice of Appeal and the required fee was filed October 30, 2006. The Panel's decision was mailed November 20, 2006, maintaining the rejections of the above-noted claims. This amended appeal brief is in response to a notice of non-compliant appeal brief (37 C.F.R. §41.37) mailed March 29, 2007.

(1) REAL PARTY IN INTEREST

The real party in interest is Velcro Industries B.V., the assignee.

(2) RELATED APPEALS AND INTERFERENCES

There are no related pending appeals or interferences.

(3) STATUS OF CLAIMS

Claims 1-3, 5-20, 22-37, and 39-57 are pending.

Claims 1, 19, and 37 are in independent form.

Claims 4, 21, 38, and 54 are cancelled.

Claims 1, 5, 19, 22, 37, and 39 have been previously amended.

Claims 55-57 were previously added.

(4) STATUS OF AMENDMENTS

All amendments have been entered.

(5) SUMMARY OF CLAIMED SUBJECT MATTER

Independent claims 1, 19 and 37 are each directed to a releasable touch fastener (e.g. 100; Fig. 1; p. 6, line 28 through p. 7, line 4) including a loop component (e.g. 400; Figs. 13-15; p. 17, line 19 through p. 19, line 11) having a sheet-form loop base (e.g. 402; Figs. 15-17; p. 18, line 8 through p. 19, line 16) and an array of female fastener elements (e.g. 406; Figs. 13-14; p. 17, line 19 through p. 19, line 16) extending from the loop base (e.g. 402; Figs. 15-17; p. 18, line 8 through p. 19, line 16).

The releasable touch fastener (e.g. 100; Fig. 1; p. 6, line 28 through p. 7, line 4) also includes a hook component (e.g. 101, 102, 102a, 420; Figs. 3-5, 8, 18-23; p. 6, line 28 through p. 10, line 18; p. 12 lines 9-25; p. 19 lines 9-27) having a sheet-form hook base (e.g. 104, 304, 422; Fig. 3, 19, 19A, 21, 21A; p. 6, line 28 through p. 8, line 11; p. 19, line 28 through p. 20, line 24) and an array of male fastener elements (e.g. 106, 306, 424; Figs. 3-5, 8, 18-23; p. 6, line 28 through p. 10, line 18; p. 12 lines 9-25; p. 19 lines 9-27) extending from the base (e.g. 104, 304, 422; Fig. 3, 19, 19A, 21, 21A; p. 6, line 28 through p. 8, line 11; p. 19, line 28 through p. 20, line

24) and configured to releasably engage the female fastener elements (e.g. 406; Figs. 13-14; p. 17, line 19 through p. 19, line 16) of the loop component (e.g. 400; Figs. 13-15; p. 17, line 19 through p. 19, line 11).

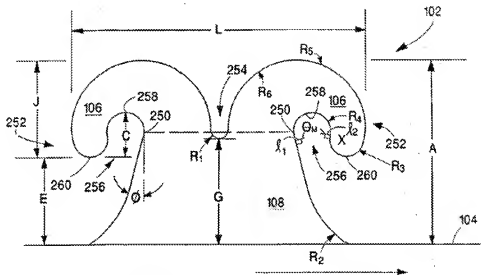

FIG. 3

Claim 1 requires, in pertinent part, that the loop component (e.g. 400; Figs. 13-15; p. 17, line 19 through p. 19, line 11) and the hook component (e.g. 101, 102, 102a, 420; Figs. 3-5, 8, 18-23; p. 6, line 28 through p. 10, line 18; p. 12 lines 9-25; p. 19 lines 9-27) are configured such that the fastener has an *engaged thickness* of less than about 0.11 inch and a *final peel resistance* of at least 0.3 pound per inch of closure width.

Claim 19 requires, in pertinent part, that the loop component (e.g. 400; Figs. 13-15; p. 17, line 19 through p. 19, line 11) and the hook component (e.g. 101, 102, 102a, 420; Figs. 3-5, 8, 18-23; p. 6, line 28 through p. 10, line 18; p. 12 lines 9-25; p. 19 lines 9-27) are configured such that the fastener has an *engaged thickness* of less than about 0.11 inch and an *initial peel resistance* of at least 0.5 pounds per inch of closure width.

Claim 37 requires, in pertinent part, that the loop component (e.g. 400; Figs. 13-15; p. 17, line 19 through p. 19, line 11) and the hook component (e.g. 101, 102, 102a, 420; Figs. 3-5, 8, 18-23; p. 6, line 28 through p. 10, line 18; p. 12 lines 9-25; p. 19 lines 9-27) are configured such

that the touch fastener has an *engaged thickness* of less than about 0.11 inch and an *initial shear resistance* of at least 10 pounds per square inch.

(6) GROUNDS OF REJECTIONS TO BE REVIEWED ON APPEAL

A) Claims 1-3, 7-20, 24-37 and 39-57 stand rejected under 35 U.S.C. 103(a) as being obvious over Kingsford et al. (US 6,851,161 B2) in view of Provost et al. (US 4,984,339) and Kennedy (US 6,348,419 B1).

B) Claims 5, 6, 22, 39, 40, and 55-57 stand rejected under 35 U.S.C. 103(a) as being obvious over Kingsford et al. (US 6,851,161 B2) in view of Provost et al. (US 4,984,339), as applied to claims 1, 19, and 37; and further in view of Kennedy (US 6,348,419 B1).

(7) ARGUMENT

Applicants respectfully submit that all claims are non-obvious over Kingsford in view of Provost, or in view of both Provost and Kennedy, for at least the reasons outlined below.

A) Claims 1-3, 7-20, 24-37 and 39-57 are not obvious under 35 U.S.C. 103(a) over Kingsford in view of Provost and Kennedy.

Kingsford discloses a thin rib-and-groove sealing closure with hook and loop fastener elements and describes how using the hook and loop fasteners elements in combination with a seal reduces the likelihood of unwanted opening of the closure (*See e.g.* col. 4, lines 15-33). However, Kingsford neither discloses nor enables the formation a particularly strong closure to perform its function, and discloses nothing regarding peel strength.

The Office concedes that Kingsford fails to disclose a touch fastener that has hook and loop components provided with a final peel resistance of at least 0.3 pounds per inch of closure width. However, the Office contends that Provost provides hook and loop components that provide a final peel resistance of at least 0.3 pounds per inch of closure width.

To establish a *prima facie* case of obviousness, the Office must establish (1) that the prior art reference (or combined references) teach or suggest all the claim limitations; and (2) that there is some suggestion or motivation, either in the references themselves, or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or references, or to combine reference teachings; and (3) that there is a reasonable expectation of success. Merely

combining references that separately disclose all of the recited claim limitations does not, by itself, establish a *prima facie* case of obviousness. The combined references must together *enable* the invention sufficiently to provide one of ordinary skill with a reasonable expectation of success. In this case, merely combining one reference showing a thin fastener with another showing a strong fastener does not enable how to create the claimed fastener. It was not until Applicants' invention that the claimed invention was enabled.

Provost discloses hook and loop fasteners having a profile defined by inner and outer generally concave and convex smooth surfaces, respectively. The disclosure provides a hook height of 0.050 inches ± 0.002 inches (col. 5, line 8), but does not disclose, suggest, or enable the use of the hooks as part of a low profile closure, and discloses nothing of overall closure thickness. Provost also discloses in Table III a range of peel and sheer resistances for hooks of different materials to exemplify the performance of the disclosed hook geometry. However, Provost does not disclose or suggest that the peel data corresponds to either Initial Peel Resistance or Final Peel Resistance. Applicants respectfully submit that peel resistance is a function of both the loop component and the hook component, not just of the hook. Kingsford and Provost do not disclose, suggest, or enable a manner in which to combine certain configurations of Provost's hooks that may provide high peel and shear resistance to Kingsford's rib-and-groove sealing closure to result in a low profile closure exhibiting high peel and/or shear resistance. Furthermore, Provost does not even describe the type of loop material used in Applicants' closures. There is no enabling disclosure, motivation, or any reasonable expectation of success in Provost or Kingsford that would lead a person of ordinary skill in the art to provide a touch fastener having a loop component and a hook component configured to releasably engage female fastener elements of the loop component such that the fastener has an engaged thickness of less than about 0.11 inch and a final peel resistance of at least 0.3 pound per inch of closure width.

The Examiner takes official notice that bi-directional male fastener components and woven fabric loop components are well known in the art. For the record, Applicants do not concur that finding such elements in the prior art makes reciting them in connection with or in the context of a broader claimed invention obvious. Thus, Applicants do not concur with the

Examiner's official notices, and don't believe that patentability of the claims is determined by such notices.

Kennedy discloses an extruded hook portion of a hook and loop fastener system created on a mold roll having hook forming cavities in its surface and modified to have favorable characteristics for bonding to other materials. Kennedy does not disclose or suggest that the hooks formed can be used as part of a low profile closure, and does not disclose a loop component, and therefore does not disclose any overall closure thickness. As a result, there is no motivation to combine this reference with Kingsford and Provost.

Applicants therefore respectfully submit that claim 1 and all claims that depend therefrom, are non-obvious over Kingsford in view of Provost and Kennedy.

The Office contends that a combination of rejections of claims 1 and 2 (claim 2 depending from claim 1 and featuring initial peel resistance) will result in the limitations of claim 19. Applicants respectfully submit that the Office is not considering the claimed invention as a whole. While claim 1 features a combination of thinness and *final* peel resistance, claim 19 features a combination of thinness and *initial* peel resistance. Claim 2 features a combination of thinness, *initial* peel resistance and *final* peel resistance. Obviousness cannot be established by using the Applicants' application as a template to fit together independent pieces of prior art. *See e.g.* Interconnect Planning Corp. v. Feil, 774 F.2d 1132; Loctite Corp. v. Ultraseal Ltd.; 781 F.2d 861; and In re Fine, 837 F.2d 1071. Accordingly, claims are not disjointed lists of elements, but present an invention that must be considered *as a whole. See e.g.* MPEP 2141.02; and Stratoflex, Inc. v. Aeroquip, 713 F.2d 1530. Applicants respectfully submit that claim 19 and its dependent claims are non-obvious over Kingsford in view of Provost for at least the reason that the cited combination of references neither suggests nor enables a low profile closure having an engaged thickness of less than about 0.11 inch in combination with an initial peel resistance of at least 0.5 pounds per inch of closure width.

The Office contends that a combination of rejections of claims 1 and 3 (claim 3 requires "the hook and loop components are so configured to provide an initial shear resistance of at least 10 pounds per square inch") will result in the limitations of claim 37. Again, Applicants respectfully submit that the Office is not considering the claimed invention as a whole. Applicants submit that claim 37 and its dependent claims are non-obvious over Kingsford in

view of Provost, or of Provost and Kennedy, for at least the reason that neither cited combination of references suggests nor enables a low profile closure having an engaged thickness of less than about 0.11 inch in combination with an initial shear resistance of at least 10 pounds per square inch.

B) Claims 5, 6, 22, 39, 40, and 55-57 are not obvious under 35 U.S.C. 103(a) over Kingsford in view of Provost, as applied to claims 1, 19, and 37; and further in view of Kennedy.

The Office concedes that Kennedy fails to disclose a hook component having a stitch hole tear strength of at least 2.0 pounds or at least 5.0 pounds. However, the Office asserts that Kennedy's disclosure of a component having a fabric sheet laminated to the hook component is *capable* of having such a stitch hole tear strength. Applicants take these statements to mean either that the Office believes that those hook components disclosed by Kennedy would *inherently* have a stitch hole tear strength of at least 2.0 pounds or 5.0 pounds, or that one of ordinary skill in the art would otherwise have been led by Kennedy to provide a fastener having such a stitch hole tear strength. Applicants respectfully disagree. In relying on inherency, the Office has the burden to show that the inherency *necessarily* flows from the disclosure of the reference used to reject the claims. It is not enough to show that a certain result *may* occur or is *capable* of occurring. Rather, the Office has the burden of showing that the result is *necessarily* occurring. *See* MPEP 2112; In re Rijckaert, 9 F.3d 1531; and Ex parte Levy, 17 USPQ2d 1464. As a result, the Office has failed to identify any particular teaching or aspect of Kennedy that would motivate a person of ordinary skill to provide a proposed Kingsford-Provost combination product with a particular stitch hole tear strength or to specifically reinforce a fastener product in such a way that a particular stitch hole tear strength is obtained.

CONCLUSION

Applicants respectfully submit that all claims are non-obvious over Kingsford in view of Provost, or in view of both Provost and Kennedy, for at least the reasons outlined above. The brief fee of $500 is enclosed. Please apply any other charges or credits to Deposit Account No. 06-1050, referencing Attorney Docket No. 05918-322001.

Respectfully submitted,

Date: April 2, 2007

/Brett A. Krueger/
Brett A. Krueger
Reg. No. 54,243

Fish & Richardson P.C.
225 Franklin Street
Boston, MA 02110
Telephone: (617) 542-5070
Facsimile: (617) 542-8906

21602625.doc

APPENDIX OF CLAIMS

1. A releasable touch fastener comprising

a loop component having a sheet-form loop base and an array of female fastener elements extending from the loop base; and

a hook component having a sheet-form hook base and an array of male fastener elements extending from the base and configured to releasably engage the female fastener elements of the loop component;

wherein the touch fastener has an Engaged Thickness of less than about 0.11 inch, and

wherein the hook and loop components are so configured to provide a Final Peel Resistance of at least 0.3 pound per inch of closure width.

2. The releasable touch fastener of claim 1 wherein the hook and loop components are so configured to provide an Initial Peel Resistance of at least 0.5 pound per inch of closure width.

3. The releasable touch fastener of claim 1 wherein the hook and loop components are so configured to provide an Initial Shear Resistance of at least 10 pounds per square inch.

5. The releasable touch fastener of claim 55 wherein the hook base comprises a sheet of resin and the male fastener elements have stems extending contiguously from the sheet of resin, and wherein the Stitch Hole Tear Strength is at least 5.0 pounds.

6. The releasable touch fastener of claim 5 wherein the hook base includes a fabric backing laminated to a side of the hook base opposite the fastener elements.

7. The releasable touch fastener of claim 1 wherein the hook base comprises a sheet of resin, and wherein the male fastener elements have stems extending contiguously from the sheet of resin.

8. The releasable touch fastener of claim 7 wherein the male fastener elements have molded crooks.

9. The releasable touch fastener of claim 8 wherein each male fastener element has two crooks extending in opposite directions along the hook base.

10. The releasable touch fastener of claim 7 wherein the fastener elements are arranged in a density of at least 350 fastener elements per square inch of the base.

11. The releasable touch fastener of claim 7 wherein the stems have opposing surfaces defined by severed resin.

12. The releasable touch fastener of claim 1 wherein the loop component comprises a woven fabric.

13. The releasable touch fastener of claim 12 wherein the hook base comprises a sheet of resin, and wherein the male fastener elements have stems extending contiguously from the sheet of resin.

14. The releasable touch fastener of claim 1 wherein the Engaged Thickness is less than 0.10 inch.

15. The releasable touch fastener of claim 14 wherein the Engaged Thickness is less than 0.09 inch.

16. The releasable touch fastener of claim 15 wherein the Engaged Thickness is less than 0.08 inch.

17. The releasable touch fastener of claim 1 wherein the Final Peel Resistance is at least 0.4 pound per inch of closure width.

18. The releasable touch fastener of claim 17 wherein the Final Peel Resistance is at least 0.5 pound per inch of closure width.

19. A releasable touch fastener comprising

a loop component having a sheet-form loop base and an array of female fastener elements extending from the loop base; and

a hook component having a sheet-form hook base and an array of male fastener elements extending from the base and configured to releasably engage the female fastener elements of the loop component;

wherein the touch fastener has an Engaged Thickness of less than about 0.11 inch, and

wherein the male and female fastener elements are so configured to provide an Initial Peel Resistance of at least 0.5 pounds per inch of closure width.

20. The releasable touch fastener of claim 19 wherein the hook and loop components are so configured to provide an Initial Shear Resistance of at least 10 pounds per square inch.

22. The releasable touch fastener of claim 56 wherein the hook base comprises a sheet of resin and the male fastener elements have stems extending contiguously from the sheet of resin, and wherein the Stitch Hole Tear Strength is at least 5.0 pounds.

23. The releasable touch fastener of claim 22 wherein the hook base includes a fabric backing laminated to a side of the hook base opposite the fastener elements.

24. The releasable touch fastener of claim 19 wherein the hook base comprises a sheet of resin, and wherein the male fastener elements have stems extending contiguously from the sheet of resin.

25. The releasable touch fastener of claim 24 wherein the male fastener elements have molded crooks.

26. The releasable touch fastener of claim 24 wherein each male fastener element has two crooks extending in opposite directions along the hook base.

27. The releasable touch fastener of claim 24 wherein the fastener elements are arranged in a density of at least 350 fastener elements per square inch of the base.

28. The releasable touch fastener of claim 24 wherein the stems have opposing surfaces defined by severed resin.

29. The releasable touch fastener of claim 19 wherein the loop component comprises a woven fabric.

30. The releasable touch fastener of claim 29 wherein the hook base comprises a sheet of resin, and wherein the male fastener elements have stems extending contiguously from the sheet of resin.

31. The releasable touch fastener of claim 19 wherein the Engaged Thickness is less than 0.10 inch.

32. The releasable touch fastener of claim 31 wherein the Engaged Thickness is less than 0.09 inch.

33. The releasable touch fastener of claim 32 wherein the Engaged Thickness is less than 0.08 inch.

34. The releasable touch fastener of claim 19 wherein the Initial Peel Resistance is at least 0.6 pound per inch of closure width.

35. The releasable touch fastener of claim 34 wherein the Initial Peel Resistance is at least 0.69 pound per inch of closure width.

36. The releasable touch fastener of claim 35 wherein the Initial Peel Resistance is at least 0.8 pound per inch of closure width.

37. A releasable touch fastener comprising

a loop component having a sheet-form loop base and an array of female fastener elements extending from the loop base; and

a hook component having a sheet-form hook base and an array of male fastener elements extending from the base and configured to releasably engage the female fastener elements of the loop component;

wherein the touch fastener has an Engaged Thickness of less than about 0.11 inch, and

wherein the male and female fastener elements are so configured to provide an Initial Shear Resistance of at least 10 pounds per square inch.

39. The releasable touch fastener of claim 57 wherein the hook base comprises a sheet of resin and the male fastener elements have stems extending contiguously from the sheet of resin, and wherein the Stitch Hole Tear Strength is at least 5.0 pounds.

40. The releasable touch fastener of claim 39 wherein the hook base includes a fabric backing laminated to a side of the hook base opposite the fastener elements.

41. The releasable touch fastener of claim 37 wherein the hook base comprises a sheet of resin, and wherein the male fastener elements have stems extending contiguously from the sheet of resin.

42. The releasable touch fastener of claim 41 wherein the male fastener elements have molded crooks.

43. The releasable touch fastener of claim 41 wherein each male fastener element has two crooks extending in opposite directions along the hook base.

44. The releasable touch fastener of claim 41 wherein the fastener elements are arranged in a density of at least 350 fastener elements per square inch of the base.

45. The releasable touch fastener of claim 41 wherein the stems have opposing surfaces defined by severed resin.

46. The releasable touch fastener of claim 37 wherein the loop component comprises a woven fabric.

47. The releasable touch fastener of claim 46 wherein the hook base comprises a sheet of resin, and wherein the male fastener elements have stems extending contiguously from the sheet of resin.

48. The releasable touch fastener of claim 37 wherein the Engaged Thickness is less than 0.10 inch.

49. The releasable touch fastener of claim 48 wherein the Engaged Thickness is less than 0.09 inch.

50. The releasable touch fastener of claim 49 wherein the Engaged Thickness is less than 0.08 inch.

51. The releasable touch fastener of claim 37 wherein the Initial Shear Resistance is at least 15 pounds per square inch.

52. The releasable touch fastener of claim 51 wherein the Initial Shear Resistance is at least 20 pounds per square inch.

53. The releasable touch fastener of claim 52 wherein the Initial Shear Resistance is at least 25 pounds per square inch.

55. The releasable touch fastener of claim 1 wherein the hook component has a Stitch Hole Tear Strength of at least 2.0 pounds.

56. The releasable touch fastener of claim 19 wherein the hook component has a Stitch Hole Tear Strength of at least 2.0 pounds.

57. The releasable touch fastener of claim 37 wherein the hook component has a Stitch Hole Tear Strength of at least 2.0 pounds.

EVIDENCE APPENDIX

None.

RELATED PROCEEDINGS APPENDIX

None.